



AF/2871  
Image / #

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of : **Confirmation No. 6894**  
Takuma HATTORI et al. : Atty Docket No. 99-0326A  
Serial No. 09/273, 261 : Group Art Unit 2871  
Filed March 22, 1999 : Examiner D. Nguyen  
ATTACHMENT FILM FOR ELECTRIC  
DISPLAY DEVICE :

**PATENT OFFICE FEE TRANSMITTAL FORM**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

THE COMMISSIONER IS AUTHORIZED  
TO CHARGE ANY DEFICIENCY IN THE  
FEES FOR THIS PAPER TO DEPOSIT  
ACCOUNT NO. 23-0975

Sir:

Attached hereto is a check in the amount of \$330.00 to cover Patent Office fees relating to filing the following attached papers:

Appeal Brief ..... \$330.00

A duplicate copy of this paper is being submitted for use in the Accounting Division, Office of Finance.

*The Commissioner is authorized to charge any deficiency or to credit any overpayment associated with this communication to Deposit Account No. 23-0975, with the EXCEPTION of deficiencies in fees for multiple dependent claims in new applications.*

Respectfully submitted,

Takuma HATTORI et al.

By Jay F. Williams  
Jay F. Williams  
Registration No. 48,036  
Attorney for Applicants

MMJ/JFW/nk  
WENDEROTH, LIND & PONACK, L.L.P.  
2033 K St., N.W., Suite 800  
Washington, D.C. 20006-1021  
Telephone (202) 721-8200  
January 7, 2004

[Check No. 59601]  
99\_0326A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of : **Confirmation No. 6894**  
Takuma HATTORI et al. : **Docket No. 99-0326A**  
Serial No. 09/273, 261 : **Group Art Unit 2871**  
Filed March 22, 1999 : **Examiner D. Nguyen**

ATTACHMENT FILM FOR ELECTRIC  
DISPLAY DEVICE

---

**BRIEF FOR APPELLANTS**

**Mail Stop APPEAL BRIEF-PATENTS**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

THE COMMISSIONER IS AUTHORIZED  
TO CHARGE ANY DEFICIENCY IN THE  
FEES FOR THIS PAPER TO DEPOSIT  
ACCOUNT NO. 23-0975

Sir:

This is an appeal from the final decision of the Primary Examiner as set forth in the Office  
Action dated May 8, 2003 (Paper No. 22), finally rejecting claims 1-7 and 9-11 which are  
reproduced as Appendix A to this brief.

**TABLE OF CONTENTS**

	<b><u>PAGE</u></b>
I. <u>Real Party in Interest</u> .....	3
II. <u>Related Appeals and Interferences</u> .....	3
III. <u>Status of Claims</u> .....	3
IV. <u>Status of Amendments</u> .....	3
V. <u>Summary of the Invention</u> .....	3-4
VI. <u>The Issues</u> .....	5
VII. <u>Grouping of Claims</u> .....	6
VIII. <u>Argument</u> .....	6-17
IX. <u>Conclusion</u> .....	17
APPENDIX A .....	18-19

**I. REAL PARTY IN INTEREST**

The real party in interest in this application is Tomoegawa Paper Co., Ltd., assignee of the entire right, title and interest to this application.

**II. RELATED APPEALS AND INTERFERENCES**

There are no related appeals known to Appellants, Appellants' legal representatives, or assignee which will affect or be affected by, or have a bearing on the Board's decision in the present appeal.

**III. STATUS OF CLAIMS**

The status of the claims as set forth in the final Office Action dated May 8, 2003 is as follows:

pending claims:	1-7 and 9-11
claims appealed:	1-7 and 9-11
claims cancelled:	8, 12, and 13

**IV. STATUS OF AMENDMENTS**

The only amendment subsequent to Final Rejection was filed on February 10, 2003 and was entered into the record.

**V. SUMMARY OF THE INVENTION**

The invention of this appeal relates to an attachment film for an electronic display, which is mainly used for an image display device such as a TV cathode ray tube, by attaching the attachment film to the surface of an image display device.

When the attachment film of the present invention is used for the above purpose, the quantity of transmitted light from an image display device can be adjusted, so that there can be

easily and inexpensively produced image display device giving displayed images which are remarkably easy to see. Specification, page 1, lines 5-14. Conventionally, a glass unit as a screen of a display device such as a TV cathode ray tube contains a colorant for adjusting the quantity of transmitted light from an image display device. Specification, page 1, lines 16-20.

In recent years, there have been developed displays having a cathode ray tube, etc., of which the viewer side, i.e., the front side, is formed as a flat surface. In a cathode ray tube of the above type, the screen of the inside, i.e., opposite to the viewer side, of a glass unit has a small thickness in the central portion thereof, and the thickness increases toward circumferential portions. In the above glass unit having a change in thickness, for incorporating a colorant in the above glass unit as is conventional, the central portion is required to be colored densely and it is required to decrease the color toward the circumferential portions. The reason therefor is as follows. When the colorant concentration of the glass unit is uniform over the entire screen of the glass unit, the optical transmissivity and scattering properties differ due to the thickness of a glass unit, so that the coloration property in the central portion of the glass unit decreases and the coloration property increases toward the circumferential portions. Specification, page 1, line 28 to page 2, line 18.

Conventionally, therefore, it has been attempted to produce a cathode ray tube in which the central portion is colored densely and the coloration is decreased toward the circumferential portions as described above. However, the problem is that it is difficult and expensive to produce such a cathode ray tube. Specification, page 2, lines 4-18.

In contrast, the attachment film of the present invention comprises an adhesive layer which contains carbon black and it has optical transmission properties. Specification, page 1, lines 6-14; page 3, lines 4-7; and lines 24-28. Therefore, when the film is attached not to a colorant-containing glass unit which is difficult to produce, but to the surface of a transparent glass unit which is easy to produce, it becomes possible to attain the adjustment of a uniform quantity of transmitted light over the entire screen of the glass unit, even in a cathode ray tube in which the

screen of a glass unit has a small thickness in the central portion thereof and the thickness increases toward circumferential portions so that there can be obtained an image display device giving displayed images which are remarkably easy to see. Specification, page 3, lines 4-32.

The attachment film which is used for adjusting the quantity of transmitted light from a light source and adjusting the black and white contrast, comprises an adhesive layer which is re-separable and contains carbon black having a pH of 4 or less dispersed therein, and contains an acrylic adhesive having a carbonyl group and/or a hydroxyl group and is formed on one surface of a transparent substrate. Specification, page 10, lines 23-25; page 12, lines 11-14.

#### **VI. THE ISSUES**

- A. Whether claims 1, 3, and 4 are anticipated by Inoue et al., U.S. Patent No. 5,786,042?
- B. Whether claim 2 is obvious over Inoue et al., U.S. Patent No. 5,786,042, in view of Aoyama et al., U.S. Patent No. 6,147,732?
- C. Whether claims 5 and 6 are obvious over Inoue et al., U.S. Patent No. 5,786,042, in view of Kawazu et al., U.S. Patent No. 5,876,854?
- D. Whether claim 7 is obvious over Inoue et al., U.S. Patent No. 5,786,042, in view of Baker et al., U.S. Patent No. 5,200,477?
- E. Whether claims 9 and 10 are obvious over Inoue et al., U.S. Patent No. 5,786,042, in view of Urano et al., U.S. Patent No. 5,800,952?
- F. Whether claim 11 is obvious over Inoue et al., U.S. Patent No. 5,786,042, in view of Urano et al., U.S. Patent No. 5,800,952, further in view of Aoyama et al., U.S. Patent No. 6,147,732?

**VII. GROUPING OF CLAIMS**

A. For the purpose of the rejection of claims 1, 3, and 4 under 35 U.S.C. § 102(e) as allegedly anticipated by Inoue et al., U.S. Patent No. 5,786,042, these claims stand or fall together.

B. For the purpose of the rejection of claim 2 under 35 U.S.C. §103(a) as allegedly unpatentable over Inoue et al., U.S. Patent No. 5,786,042, in view of Aoyama et al., U.S. Patent No. 6,147,732, this claim stands or falls alone.

C. For the purpose of the rejection of claims 5 and 6 under 35 U.S.C. §103(a) as allegedly unpatentable over Inoue et al., U.S. Patent No. 5,786,042, in view of Kawazu et al., U.S. Patent No. 5,876,854, these claims stand or fall together.

D. For the purpose of the rejection of claim 7 under 35 U.S.C. §103(a) as allegedly unpatentable over Inoue et al., U.S. Patent No. 5,786,042, in view of Baker et al., U.S. Patent No. 5,200,477, this claim stands or falls alone.

E. For the purpose of the rejection of claims 9 and 10 under 35 U.S.C. §103(a) as allegedly unpatentable over Inoue et al., U.S. Patent No. 5,786,042, in view of Urano et al., U.S. Patent No. 5,800,952, these claims stand or fall together.

F. For the purpose of the rejection of claim 11 under 35 U.S.C. §103(a) as allegedly unpatentable over Inoue et al., U.S. Patent No. 5,786,042, in view of Urano et al., U.S. Patent No. 5,800,952, and further in view of Aoyama et al., U.S. Patent No. 6,147,732, this claim stands or falls alone.

**VIII. ARGUMENTS**

**A. Rejection Under 35 U.S.C. § 102(e)**

Claims 1, 3, and 4 have been rejected under 35 U.S.C. § 102(e) as allegedly anticipated by Inoue et al., U.S. Patent No. 5,786,042. Appellants respectfully traverse this rejection for the following reasons.

Inoue fails to anticipate the claimed invention because Inoue fails to teach and/or suggest each and every element of the claimed invention. In particular, Inoue fails to teach an attachment film that has dispersibility and light permeation (transparency). Inoue also fails to disclose an acrylic adhesive having a carboxyl group and/or a hydroxyl group. Nor does Inoue disclose a reseparable adhesive layer containing carbon black having a pH of 4 or less.

To anticipate a claim, a single prior art reference must teach, either expressly or inherently, each and every element of the claimed invention.

In the instant case, the claims of the present invention call for an attachment film for an electronic display, which is for adjusting the quantity of transmitted light and for adjusting the black and white contrast, which comprises an adhesive layer which is re-separable and contains carbon black having a pH of 4 or less dispersed therein and contains an acrylic adhesive having a carboxyl group and/or a hydroxyl group and is formed on one surface of a transparent substrate. Dependent claims 3 and 4 further call for the adhesive layer to contain a coloring pigment different from carbon black, wherein the coloring pigment is at least one pigment selected from the group consisting of a red pigment and a blue pigment.

Inoue fails to teach an attachment film for an electronic display that is used for adjusting the quantity of transmitted light from a light source forth and that has the dispersibility and the light permeation (transparency) necessary for adjusting the quantity of light from a light source as shown in the in the adhesive layer of the present invention. In fact, the resin black matrix of Inoue is a different device with completely different properties than the attachment film of the present invention.

Specifically, Inoue relates to a resin black matrix for color filters used in liquid crystal display devices. Inoue, col. 1, lines 6-7. Generally, a color filter for liquid crystal display consists of a large number of color triplets, each comprising three color pixels (red, green, and blue), formed on a transparent substrate. To enhance the contrast, light-shading regions of predetermined width are formed between these pixels. Inoue, col. 1, lines 11-17. These light-



shading regions of predetermined width are called black matrices because of their black color on the screen. These black matrices are used to shade light, not to permeate light. In this regard, Inoue further discloses that the object of his invention is to provide a resin black matrix which is high in light-shadability. Inoue, col. 2, lines 1-5.

By contrast, the present invention provides for an attachment film for an electronic display, which film is used for adjusting the quantity of transmitted light from a light source and for scattering the transmitted light. This attachment film possesses the property of light permeation. The resin black matrix of Inoue lacks the property of light permeation. Thus, the resin black matrix of Inoue has the property of shading light, whereas the claimed attachment film has the opposite property of light permeation. Accordingly, the resin black matrix of Inoue and the attachment film of the claimed invention are completely different in terms of structure, properties, function, and effect. For these reasons, Inoue cannot be said to teach and/or suggest each and every element of the claimed invention.

Furthermore, Inoue does not disclose an acrylic adhesive layer having carbon black dispersed therein and containing a carboxyl group and/or a hydroxyl group. The rejection states that Inoue at column 7, lines 42+ discloses "an acrylic adhesive having a carboxyl group and/or a hydroxyl group." However, rather than an acrylic adhesive having carbon black dispersed therein and containing a carboxyl group and/or a hydroxyl group, Inoue discloses a carboxyl group and a hydroxyl group concentration on the surface of carbon black grains. Inoue, col. 3, lines 1-6, col. 7, lines 42-50. The concentrations of hydroxyl groups and carboxylic groups on the surface of carbon black are determined by using X-ray photo-electric spectrometry, called XPS or ESCA. Thus, Inoue does not disclose an attachment film comprising an acrylic adhesive having carbon black and a carboxyl group and/or a hydroxyl group dispersed therein.

In addition, the present invention employs an adhesive layer which contains carbon black having a pH of 4 or less dispersed therein in addition to the acrylic adhesive having a carbonyl group and/or a hydroxyl group. An acrylic adhesive having a carbonyl group and/or a hydroxyl

group improves the dispersibility of the carbon having a pH of 4 or less. This improvement in the dispersibility of the carbon black further improves light permeation and the contrast between black and white.

In this regard, Appellants submitted a Declaration under 37 C.F.R. § 1.132 by Takuma Hattori ("Hattori Declaration") along with the Amendment and Reply of February 10, 2003. This Declaration contains experimental data clarifying that the use of the acid, carbon black having the above characteristics, provides for excellent dispersibility in the adhesive layer of the present invention, which, in turn, provides for the transparency necessary for adjusting the quantity of light from a light source and for adjusting black and white contrast.

Finally, the adhesive layer of the present invention is reseparable, whereas the adhesive in Inoue does not exhibit reseparability. In this regard, Inoue describes a procedure wherein the polyamide precursor is cured at 300°C for 30 minutes after etching to form a lattice black matrix. See Inoue, col.12, lines 22+, Example 1. This same procedure is also utilized in the other examples throughout Inoue. Such a procedure demonstrates that the adhesive layer in Inoue does not have reseparability.

In sum, Inoue fails to disclose a device with the same structure, function, and properties as the claimed invention. Consequently, Inoue fails to teach and/or suggest each and every element of the claimed invention. Accordingly, the rejection of claims 1, 3, and 4 under 35 U.S.C. § 102(e) is untenable and should be reversed.

**B. The Rejections Under 35 U.S.C. §103(a)**

**1. Inoue in view of Aoyama**

Claim 2 has been rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Inoue et al., U.S. Patent No. 5,786,042, in view of Aoyama et al., U.S. Patent No. 6,147,732. Appellants respectfully traverse this rejection for the reasons noted above with regard to Inoue and for the following reasons.

The claimed invention calls for an attachment film for an electronic display, which is for adjusting the quantity of transmitted light and for adjusting the black and white contrast, which comprises an adhesive layer which is re-separable and contains carbon black having a pH of 4 or less dispersed therein and contains an acrylic adhesive having a carboxyl group and/or a hydroxyl group and is formed on one surface of a transparent substrate, and an anti-reflection layer on one side of the transparent substrate.

The cited references fail to teach and/or suggest an attachment film that has the properties of dispersibility and light permeation (transparency). The cited references also fail to disclose an acrylic adhesive layer having a carboxyl group and/or a hydroxyl group. Nor do the references disclose a reseparable adhesive layer containing carbon black having a pH of 4 or less.

The rejection states that “regarding claim 2, Inoue et al. disclose the claimed invention as described above except for an anti-reflection layer formed on the side of the substrate” and relies on Aoyama as teaching an anti-reflection layer formed on the surface of a transparent substrate. However, Appellants herein reiterate the arguments set forth above regarding Inoue’s failure to teach and/or suggest each and every element of the claimed invention.

Aoyama fails to remedy the deficiencies of Inoue. Aoyama discloses a dot matrix-type display device in which an optical low-pass filter is provided on a display. Fig. 38 shows a structure in which a separator 13, an adhesive layer 12, a substrate 25, an optical-low pass filter 10, a bonding layer 11, a protective layer 14B, a polarizer 24a, an outside protective layer 14A, and an anti-reflection film 15 are laminated in succession. Aoyama discloses that the above laminate is incorporated into a glass substrate of a liquid-crystal panel with an adhesive layer 12. However, Aoyama does not at all disclose or suggest that carbon black is incorporated in the adhesive layer. Aoyama also fails to teach and/or suggest an attachment film that has dispersibility and light permeation (transparency). Aoyama also fails to disclose or suggest an

acrylic adhesive having a carboxyl group and/or a hydroxyl group. Nor does Aoyama disclose or suggest a reseparable adhesive layer containing carbon black having a pH of 4 or less.

Accordingly, Inoue alone or combined with Aoyama fails to teach and/or suggest each and every element of the claimed invention. Furthermore, there is no suggestion and/or motivation in either reference to combine the teachings of the two references. Thus, Inoue and Aoyama cannot render the claimed invention obvious. Therefore, the rejection of claim 2 under 35 U.S.C. § 103(a) is untenable and should be reversed.

**2. Inoue in view of Kawazu**

Claims 5 and 6 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Inoue et al., U.S. Patent No. 5,786,042, in view of Kawazu et al., U.S. Patent No. 5,876,854. Appellants respectfully traverse this rejection for the reasons noted above with regard to Inoue and for the following reasons.

The claims of the present invention call for an attachment film for an electronic display, which is for adjusting the quantity of transmitted light and for adjusting the black and white contrast, which comprises an adhesive layer which is re-separable and contains carbon black having a pH of 4 or less dispersed therein and contains an acrylic adhesive having a carboxyl group and/or a hydroxyl group and is formed on one surface of a transparent substrate, wherein the attachment film is colored neutral gray and the carbon black in the adhesive layer has an average particle diameter of 30 nm or less and has a BET specific surface area of at least 100 nm.

The rejection states that “regarding claims 5 and 6, Inoue et al. disclose all of the claimed subject matter except the attachment of film being colored in neutral gray.” Appellants again reiterate the arguments set forth above regarding Inoue’s failure to teach and/or suggest each and every element of the claimed invention.

Kawazu fails to remedy the deficiencies of Inoue. Kawazu discloses UV absorbing colored film-covered glass articles. The glass articles are used as glass plates with a UV absorbing, colored film. The plates are particularly suitable for use as windows of vehicles such

as automobiles and buildings. Kawazu, col. 1, pages 6-10. Kawazu discloses that "the color of the reflected light should preferably be close to neutral gray, and its value of a and b of the Lab color system should be most preferably 2.0 or below." Kawazu, col. 3, lines 29 to 34.

Kawazu is relied upon as disclosing the attachment of film being colored in neutral gray. However, the use and production process (col. 7, lines 41 to 47) of the UV absorbing colored film of Kawazu are completely different from those of the attachment film for an electronic display, provided by the present invention.

The invention of Kawazu is completely different from the attachment film for an electronic display in terms of usage. The purpose of the colored film of Kawazu is that "the reflectance of the light should preferably be as small as possible within a predetermined range." Kawazu, col. 3, lines 26-27. The rejection states it would have been obvious to a person having ordinary skill in the art to make attachment film having color in neutral gray in order to assure correct color of the displayed image. However, Kawazu does not at all teach that coloring can give correct color of a displayed image. Kawazu only describes that it is suitable for adjusting glittering in a proper range. Thus, Kawazu never teaches nor suggests an attachment film that has dispersibility and light permeation (transparency).

Kawazu also fails to disclose an acrylic adhesive having a carboxyl group and/or a hydroxyl group. Nor does Kawazu disclose a reseparable adhesive layer containing carbon black having a pH of 4 or less. Accordingly, neither Inoue nor Kawazu teach and/or suggest each and every element of the claimed invention. Furthermore, there is no suggestion and/or motivation in either reference to combine the teachings of the two references. Thus, Inoue and Kawazu cannot render the claimed invention obvious. Therefore, the rejection of claims 5 and 6 under 35 U.S.C. § 103(a) is untenable and should be reversed.

### **3. Inoue in view of Baker**

Claims 7 stands rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Inoue et al., U.S. Patent No. 5,786,042, in view of Baker et al., U.S. Patent No. 5,200,477. Appellants

respectfully traverse this rejection for the reasons noted above with regard to Inoue and for the following reasons.

The claimed invention calls for an attachment film for an electronic display, which is for adjusting the quantity of transmitted light and for adjusting the black and white contrast, which comprises an adhesive layer which is re-separable and contains carbon black having a pH of 4 or less dispersed therein and contains an acrylic adhesive having a carboxyl group and/or a hydroxyl group and is formed on one surface of a transparent substrate, wherein the carbon black has an average particle diameter of 30 nm or less and a BET specific surface area of at least 100 m<sup>2</sup>/g.

The rejection states that “regarding claim 7, Inoue et al. disclose the claimed invention as described above except for a BET specific surface area.” Again, Appellants reiterate the arguments set forth above regarding Inoue’s failure to teach and/or suggest each and every element of the claimed invention.

The secondary reference of Baker fails to remedy the deficiencies of Inoue. Baker is relied upon as teaching that carbon black having a specific surface area from 30 to 1,500 m<sup>2</sup>/g can be formed in the adhesive layer. However, Baker fails to remedy the deficiencies of Inoue in that it never teaches nor suggests an attachment film that has dispersibility and light permeation (transparency). Baker also fails to disclose an acrylic adhesive having a carboxyl group and/or a hydroxyl group. Nor does Baker disclose a reseparable adhesive layer containing carbon black having a pH of 4 or less.

Furthermore, Baker is directed to a process for preventing agglomeration of sticky polymers in a polymerization system which comprises adding to said polymerization system a specific amount of an inert particulate material having a surface coating thereon of an organo polydimethylsiloxane. Baker discloses carbon black having a predetermined particle diameter and a predetermined surface area as an inert particle.

The purpose, constitution and effect of Baker are completely different from those of the present invention. In this regard, Baker only discloses a carbon black which partially overlaps the

carbon black of the present invention in terms of a particle diameter and the like. By contrast, the present invention is characterized in that the acid carbon black has a pH of 4 or less. Neither Inoue nor Baker teach and/or suggest this. Nor does Baker teach an attachment film that has dispersibility and light permeation (transparency) and an acrylic adhesive having a carboxyl group and/or a hydroxyl group. Furthermore, there is no suggestion and/or motivation in either reference to combine the teachings of the two references. Thus, Inoue and Baker cannot render the claimed invention obvious. Therefore, the rejection of claim 7 under 35 U.S.C. § 103(a) is untenable and should be reversed.

**4. Inoue in view of Urano**

Claims 9 and 10 have been rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Inoue et al., U.S. Patent No. 5,786,042, in view of Urano et al., U.S. Patent No. 5,800,952. Appellants respectfully traverse this rejection for the reasons noted above with regard to Inoue and for the following reasons.

The claims of the present invention call for an attachment film for an electronic display, which is for adjusting the quantity of transmitted light and for adjusting the black and white contrast, which comprises an adhesive layer which is re-separable and contains carbon black having a pH of 4 or less dispersed therein and contains an acrylic adhesive having a carboxyl group and/or a hydroxyl group and is formed on one surface of a transparent substrate, wherein the adhesive layer further contains a photopolymerizable compound and a photopolymerization initiator and the adhesive layer contains a (meth)acrylate resin as an adhesive.

The rejection states that "Inoue et al. disclose all claimed subject matter except that the adhesive layer further contains a photopolymerizable compound and a photo polymerization initiator. Again, Appellants reiterate the arguments set forth above regarding Inoue's failure to teach and/or suggest each and every element of the claimed invention.

Urano fails to remedy the deficiencies of Inoue. Urano relates to a color filter useful for a color television, a liquid crystal display device, a camera and the like. As pointed out by the

rejection, Urano discloses that the adhesive layer further contains a photopolymerizable compound and a photopolymerization initiator to improve the developability, the sensitivity, the image-reproducing property and the adhesive property.

Urano is relied upon as disclosing that the adhesive layer further contains photopolymerizable compound and a photo polymerization initiator. Urano discloses a photopolymerizable composition for a color filter comprising at least a photopolymerization initiator system. The photopolymerizable composition accomplishes the function to improve the compatibility, the coating film-forming property, the developability, and the adhesive property. Urano, col. 2, lines 26-41.

However, the invention of Urano is a transparent substrate having a color pattern formed thereon from a photopolymeric composition. In contrast, the attachment film for an electronic display, provided by the present invention, comprises an adhesive layer which contains carbon black dispersed therein and is formed on one surface of a transparent substrate. In the present invention, the developability, the sensitivity, the image-reproducing property are not required.

Thus, the use of the present invention is completely different from the use of the invention of Urano. Properties such as the property of being re-separable, no component deposits when peeled off, no occurrence of bubbles in the adhesive layer and an improvement in light resistance, are required for the present invention. A photopolymerizable compound and a photopolymerization initiator are incorporated for satisfying these required properties.

Furthermore, the photopolymerizable composition disclosed by Urano only mentions the function of the above composition as a binder at the time of film application. Urano neither discloses nor teaches the functions and effects to be produced by the instantly claimed invention. Under the above circumstances, no one skilled in the art would think to apply the teachings of Urano, which relates to a color filter, for satisfying the above properties required in the present invention. Urano also never teaches nor suggests an attachment film that has dispersibility and light permeation (transparency). Urano also fails to disclose an acrylic adhesive having a carboxyl



group and/or a hydroxyl group. Nor does Urano disclose a reseparable adhesive layer containing carbon black having a pH of 4 or less.

Accordingly, neither Inoue nor Urano teach and/or suggest each and every element of the claimed invention. Furthermore, there is no suggestion and/or motivation in either reference to combine the teachings of the two references. Thus, Inoue and Urano cannot render the claimed invention obvious. Therefore, the rejection of claims 9 and 10 under 35 U.S.C. § 103(a) is untenable and should be reversed.

**5. Inoue in view of Urano and Aoyama**

Claim 11 has been rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Inoue et al., U.S. Patent No. 5,786,042, in view of Urano et al., U.S. Patent No. 5,800,952 and further in view of Aoyama et al., U.S. Patent No. 6,147,732. Appellants respectfully traverse this rejection for the reasons noted above with regard to Inoue, Urano and Aoyama and for the following reasons.

The claimed invention calls for an attachment film for an electronic display, which is for adjusting the quantity of transmitted light and for adjusting the black and white contrast, which comprises an adhesive layer which is re-separable and contains carbon black having a pH of 4 or less dispersed therein and contains an acrylic adhesive having a carboxyl group and/or a hydroxyl group and is formed on one surface of a transparent substrate, wherein the adhesive layer is formed on one surface of a substrate and a hard coating layer and an anti-reflection layer of formed consecutively on the other surface of the substrate.

The rejection states that "Inoue et al. disclose all claimed subject matter except for a hard coating layer and an anti-reflecting layer being consecutively formed on the other surface of a transparent layer." Inoue, Urano, and Aoyama have been discussed above. Appellants reiterate the arguments set forth above regarding these references.

As discussed above, the secondary references of Urano and Aoyama fail to remedy the deficiencies of Inoue. Urano and Aoyama are relied upon as disclosing a hard coating layer and

an anti-reflecting layer being consecutively formed on the other surface of a transparent layer. However, Urano and Aoyama fail to remedy the deficiencies of Inoue in that they fail to teach and/or suggest an attachment film that has the properties of dispersibility and light permeation (transparency). They also fail to disclose an acrylic adhesive having a carboxyl group and/or a hydroxyl group. Nor do they disclose a reseparable adhesive layer containing carbon black having a pH of 4 or less. Accordingly, neither Inoue, Urano nor Aoyama teach and/or suggest each and every element of the claimed invention. Furthermore, there is no suggestion and/or motivation in either reference to combine the teachings of the three references. Thus, these references cannot render the claimed invention obvious.

Therefore, the rejection of claim 11 under 35 U.S.C. § 103(a) is untenable and should be reversed.

**IX. CONCLUSION**

For the foregoing reasons, it is submitted that claims 1-7 and 9-11 are neither anticipated nor rendered obvious by the references relied upon by the Examiner, and thus, reversal of the final rejection is respectfully requested.

This Appeal Brief is submitted in triplicate with the requisite Government fee.

Respectfully submitted,

Takuma HATTORI et al.

By: \_\_\_\_\_

Jay F. Williams

Registration No. 48,036

Attorney for Applicants

MMJ/JFW/nk  
Washington, D.C. 20006-1021  
Telephone (202) 721-8200  
Facsimile (202) 721-8250  
January 7, 2004

APPENDIX A

CLAIMS ON APPEAL

Claim 1. An attachment film for an electronic display, which is for adjusting the quantity of transmitted light from a light source and adjusting the black and white contrast, which comprises an adhesive layer which is re-separable and contains carbon black having a pH of 4 or less dispersed therein and contains an acrylic adhesive having a carboxyl group and/or a hydroxyl group and is formed on one surface of a transparent substrate.

Claim 2. An attachment film according to claim 1, wherein an anti-reflection layer is formed on one surface or each surface of the transparent layer.

Claim 3. An attachment film according to claim 1, wherein the adhesive layer further contains a coloring pigment different from carbon black.

Claim 4. An attachment film according to claim 3, wherein the coloring pigment is at least one pigment selected from the group consisting of a red pigment and a blue pigment.

Claim 5. An attachment film according to claim 1, wherein the attachment film is colored in neutral gray.

Claim 6. An attachment film according to claim 5, which has an a-value and b-value which are within  $\pm 5$  each when measured with a color-difference meter.

Claim 7. An attachment film according to claim 1, wherein the carbon black in the adhesive layer has an average particle diameter of 30 nm or less and has a BET specific surface area of at least 100 m<sup>2</sup>/g.

Claim 9. An attachment film according to claim 1, wherein the adhesive layer further contains a photopolymerizable compound and a photopolymerization initiator.

Claim 10. The attachment film according to claim 1, wherein the adhesive layer contains a (meth) acrylate resin as an adhesive and a (meth) acrylate monomer or oligomer as the photopolymerizable compound.

Claim 11. The attachment film according to claim 1, wherein the adhesive layer is formed on one surface of the transparent substrate and a hard coating layer and an anti-reflection layer are consecutively formed on the other surface of the transparent substrate.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of : Confirmation No. 6894  
Takuma HATTORI et al. : Docket No. 99-0326A  
Serial No.09/273, 261 : Group Art Unit 2871  
Filed March 22, 1999 : Examiner D. Nguyen

ATTACHMENT FILM FOR ELECTRIC  
DISPLAY DEVICE

---

**BRIEF FOR APPELLANTS**

**Mail Stop APPEAL BRIEF-PATENTS**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

THE COMMISSIONER IS AUTHORIZED  
TO CHARGE ANY DEFICIENCY IN THE  
FEES FOR THIS PAPER TO DEPOSIT  
ACCOUNT NO. 23-0975

Sir:

This is an appeal from the final decision of the Primary Examiner as set forth in the Office Action dated May 8, 2003 (Paper No. 22), finally rejecting claims 1-7 and 9-11 which are reproduced as Appendix A to this brief.

**TABLE OF CONTENTS**

	<b><u>PAGE</u></b>
I. <u>Real Party in Interest</u> .....	3
II. <u>Related Appeals and Interferences</u> .....	3
III. <u>Status of Claims</u> .....	3
IV. <u>Status of Amendments</u> .....	3
V. <u>Summary of the Invention</u> .....	3-4
VI. <u>The Issues</u> .....	5
VII. <u>Grouping of Claims</u> .....	6
VIII. <u>Argument</u> .....	6-17
IX. <u>Conclusion</u> .....	17
APPENDIX A .....	18-19

**I. REAL PARTY IN INTEREST**

The real party in interest in this application is Tomoegawa Paper Co., Ltd., assignee of the entire right, title and interest to this application.

**II. RELATED APPEALS AND INTERFERENCES**

There are no related appeals known to Appellants, Appellants' legal representatives, or assignee which will affect or be affected by, or have a bearing on the Board's decision in the present appeal.

**III. STATUS OF CLAIMS**

The status of the claims as set forth in the final Office Action dated May 8, 2003 is as follows:

pending claims:	1-7 and 9-11
claims appealed:	1-7 and 9-11
claims cancelled:	8, 12, and 13

**IV. STATUS OF AMENDMENTS**

The only amendment subsequent to Final Rejection was filed on February 10, 2003 and was entered into the record.

**V. SUMMARY OF THE INVENTION**

The invention of this appeal relates to an attachment film for an electronic display, which is mainly used for an image display device such as a TV cathode ray tube, by attaching the attachment film to the surface of an image display device.

When the attachment film of the present invention is used for the above purpose, the quantity of transmitted light from an image display device can be adjusted, so that there can be

easily and inexpensively produced image display device giving displayed images which are remarkably easy to see. Specification, page 1, lines 5-14. Conventionally, a glass unit as a screen of a display device such as a TV cathode ray tube contains a colorant for adjusting the quantity of transmitted light from an image display device. Specification, page 1, lines 16-20.

In recent years, there have been developed displays having a cathode ray tube, etc., of which the viewer side, i.e., the front side, is formed as a flat surface. In a cathode ray tube of the above type, the screen of the inside, i.e., opposite to the viewer side, of a glass unit has a small thickness in the central portion thereof, and the thickness increases toward circumferential portions. In the above glass unit having a change in thickness, for incorporating a colorant in the above glass unit as is conventional, the central portion is required to be colored densely and it is required to decrease the color toward the circumferential portions. The reason therefor is as follows. When the colorant concentration of the glass unit is uniform over the entire screen of the glass unit, the optical transmissivity and scattering properties differ due to the thickness of a glass unit, so that the coloration property in the central portion of the glass unit decreases and the coloration property increases toward the circumferential portions. Specification, page 1, line 28 to page 2, line 18.

Conventionally, therefore, it has been attempted to produce a cathode ray tube in which the central portion is colored densely and the coloration is decreased toward the circumferential portions as described above. However, the problem is that it is difficult and expensive to produce such a cathode ray tube. Specification, page 2, lines 4-18.

In contrast, the attachment film of the present invention comprises an adhesive layer which contains carbon black and it has optical transmission properties. Specification, page 1, lines 6-14; page 3, lines 4-7; and lines 24-28. Therefore, when the film is attached not to a colorant-containing glass unit which is difficult to produce, but to the surface of a transparent glass unit which is easy to produce, it becomes possible to attain the adjustment of a uniform quantity of transmitted light over the entire screen of the glass unit, even in a cathode ray tube in which the



screen of a glass unit has a small thickness in the central portion thereof and the thickness increases toward circumferential portions so that there can be obtained an image display device giving displayed images which are remarkably easy to see. Specification, page 3, lines 4-32.

The attachment film which is used for adjusting the quantity of transmitted light from a light source and adjusting the black and white contrast, comprises an adhesive layer which is re-separable and contains carbon black having a pH of 4 or less dispersed therein, and contains an acrylic adhesive having a carbonyl group and/or a hydroxyl group and is formed on one surface of a transparent substrate. Specification, page 10, lines 23-25; page 12, lines 11-14.

## **VI. THE ISSUES**

- A. Whether claims 1, 3, and 4 are anticipated by Inoue et al., U.S. Patent No. 5,786,042?
- B. Whether claim 2 is obvious over Inoue et al., U.S. Patent No. 5,786,042, in view of Aoyama et al., U.S. Patent No. 6,147,732?
- C. Whether claims 5 and 6 are obvious over Inoue et al., U.S. Patent No. 5,786,042, in view of Kawazu et al., U.S. Patent No. 5,876,854?
- D. Whether claim 7 is obvious over Inoue et al., U.S. Patent No. 5,786,042, in view of Baker et al., U.S. Patent No. 5,200,477?
- E. Whether claims 9 and 10 are obvious over Inoue et al., U.S. Patent No. 5,786,042, in view of Urano et al., U.S. Patent No. 5,800,952?
- F. Whether claim 11 is obvious over Inoue et al., U.S. Patent No. 5,786,042, in view of Urano et al., U.S. Patent No. 5,800,952, further in view of Aoyama et al., U.S. Patent No. 6,147,732?

**VII. GROUPING OF CLAIMS**

A. For the purpose of the rejection of claims 1, 3, and 4 under 35 U.S.C. § 102(e) as allegedly anticipated by Inoue et al., U.S. Patent No. 5,786,042, these claims stand or fall together.

B. For the purpose of the rejection of claim 2 under 35 U.S.C. §103(a) as allegedly unpatentable over Inoue et al., U.S. Patent No. 5,786,042, in view of Aoyama et al., U.S. Patent No. 6,147,732, this claim stands or falls alone.

C. For the purpose of the rejection of claims 5 and 6 under 35 U.S.C. §103(a) as allegedly unpatentable over Inoue et al., U.S. Patent No. 5,786,042, in view of Kawazu et al., U.S. Patent No. 5,876,854, these claims stand or fall together.

D. For the purpose of the rejection of claim 7 under 35 U.S.C. §103(a) as allegedly unpatentable over Inoue et al., U.S. Patent No. 5,786,042, in view of Baker et al., U.S. Patent No. 5,200,477, this claim stands or falls alone.

E. For the purpose of the rejection of claims 9 and 10 under 35 U.S.C. §103(a) as allegedly unpatentable over Inoue et al., U.S. Patent No. 5,786,042, in view of Urano et al., U.S. Patent No. 5,800,952, these claims stand or fall together.

F. For the purpose of the rejection of claim 11 under 35 U.S.C. §103(a) as allegedly unpatentable over Inoue et al., U.S. Patent No. 5,786,042, in view of Urano et al., U.S. Patent No. 5,800,952, and further in view of Aoyama et al., U.S. Patent No. 6,147,732, this claim stands or falls alone.

**VIII. ARGUMENTS**

**A. Rejection Under 35 U.S.C. § 102(e)**

Claims 1, 3, and 4 have been rejected under 35 U.S.C. § 102(e) as allegedly anticipated by Inoue et al., U.S. Patent No. 5,786,042. Appellants respectfully traverse this rejection for the following reasons.

Inoue fails to anticipate the claimed invention because Inoue fails to teach and/or suggest each and every element of the claimed invention. In particular, Inoue fails to teach an attachment film that has dispersibility and light permeation (transparency). Inoue also fails to disclose an acrylic adhesive having a carboxyl group and/or a hydroxyl group. Nor does Inoue disclose a reseparable adhesive layer containing carbon black having a pH of 4 or less.

To anticipate a claim, a single prior art reference must teach, either expressly or inherently, each and every element of the claimed invention.

In the instant case, the claims of the present invention call for an attachment film for an electronic display, which is for adjusting the quantity of transmitted light and for adjusting the black and white contrast, which comprises an adhesive layer which is re-separable and contains carbon black having a pH of 4 or less dispersed therein and contains an acrylic adhesive having a carboxyl group and/or a hydroxyl group and is formed on one surface of a transparent substrate. Dependent claims 3 and 4 further call for the adhesive layer to contain a coloring pigment different from carbon black, wherein the coloring pigment is at least one pigment selected from the group consisting of a red pigment and a blue pigment.

Inoue fails to teach an attachment film for an electronic display that is used for adjusting the quantity of transmitted light from a light source forth and that has the dispersibility and the light permeation (transparency) necessary for adjusting the quantity of light from a light source as shown in the in the adhesive layer of the present invention. In fact, the resin black matrix of Inoue is a different device with completely different properties than the attachment film of the present invention.

Specifically, Inoue relates to a resin black matrix for color filters used in liquid crystal display devices. Inoue, col. 1, lines 6-7. Generally, a color filter for liquid crystal display consists of a large number of color triplets, each comprising three color pixels (red, green, and blue), formed on a transparent substrate. To enhance the contrast, light-shading regions of predetermined width are formed between these pixels. Inoue, col. 1, lines 11-17. These light-

shading regions of predetermined width are called black matrices because of their black color on the screen. These black matrices are used to shade light, not to permeate light. In this regard, Inoue further discloses that the object of his invention is to provide a resin black matrix which is high in light-shadability. Inoue, col. 2, lines 1-5.

By contrast, the present invention provides for an attachment film for an electronic display, which film is used for adjusting the quantity of transmitted light from a light source and for scattering the transmitted light. This attachment film possesses the property of light permeation. The resin black matrix of Inoue lacks the property of light permeation. Thus, the resin black matrix of Inoue has the property of shading light, whereas the claimed attachment film has the opposite property of light permeation. Accordingly, the resin black matrix of Inoue and the attachment film of the claimed invention are completely different in terms of structure, properties, function, and effect. For these reasons, Inoue cannot be said to teach and/or suggest each and every element of the claimed invention.

Furthermore, Inoue does not disclose an acrylic adhesive layer having carbon black dispersed therein and containing a carboxyl group and/or a hydroxyl group. The rejection states that Inoue at column 7, lines 42+ discloses "an acrylic adhesive having a carboxyl group and/or a hydroxyl group." However, rather than an acrylic adhesive having carbon black dispersed therein and containing a carboxyl group and/or a hydroxyl group, Inoue discloses a carboxyl group and a hydroxyl group concentration on the surface of carbon black grains. Inoue, col. 3, lines 1-6, col. 7, lines 42-50. The concentrations of hydroxyl groups and carboxylic groups on the surface of carbon black are determined by using X-ray photo-electric spectrometry, called XPS or ESCA. Thus, Inoue does not disclose an attachment film comprising an acrylic adhesive having carbon black and a carboxyl group and/or a hydroxyl group dispersed therein.

In addition, the present invention employs an adhesive layer which contains carbon black having a pH of 4 or less dispersed therein in addition to the acrylic adhesive having a carbonyl group and/or a hydroxyl group. An acrylic adhesive having a carbonyl group and/or a hydroxyl

group improves the dispersibility of the carbon having a pH of 4 or less. This improvement in the dispersibility of the carbon black further improves light permeation and the contrast between black and white.

In this regard, Appellants submitted a Declaration under 37 C.F.R. § 1.132 by Takuma Hattori ("Hattori Declaration") along with the Amendment and Reply of February 10, 2003. This Declaration contains experimental data clarifying that the use of the acid, carbon black having the above characteristics, provides for excellent dispersibility in the adhesive layer of the present invention, which, in turn, provides for the transparency necessary for adjusting the quantity of light from a light source and for adjusting black and white contrast.

Finally, the adhesive layer of the present invention is reseparable, whereas the adhesive in Inoue does not exhibit reseparability. In this regard, Inoue describes a procedure wherein the polyamide precursor is cured at 300°C for 30 minutes after etching to form a lattice black matrix. See Inoue, col.12, lines 22+, Example 1. This same procedure is also utilized in the other examples throughout Inoue. Such a procedure demonstrates that the adhesive layer in Inoue does not have reseparability.

In sum, Inoue fails to disclose a device with the same structure, function, and properties as the claimed invention. Consequently, Inoue fails to teach and/or suggest each and every element of the claimed invention. Accordingly, the rejection of claims 1, 3, and 4 under 35 U.S.C. § 102(e) is untenable and should be reversed.

**B. The Rejections Under 35 U.S.C. §103(a)**

**1. Inoue in view of Aoyama**

Claim 2 has been rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Inoue et al., U.S. Patent No. 5,786,042, in view of Aoyama et al., U.S. Patent No. 6,147,732. Appellants respectfully traverse this rejection for the reasons noted above with regard to Inoue and for the following reasons.

The claimed invention calls for an attachment film for an electronic display, which is for adjusting the quantity of transmitted light and for adjusting the black and white contrast, which comprises an adhesive layer which is re-separable and contains carbon black having a pH of 4 or less dispersed therein and contains an acrylic adhesive having a carboxyl group and/or a hydroxyl group and is formed on one surface of a transparent substrate, and an anti-reflection layer on one side of the transparent substrate.

The cited references fail to teach and/or suggest an attachment film that has the properties of dispersibility and light permeation (transparency). The cited references also fail to disclose an acrylic adhesive layer having a carboxyl group and/or a hydroxyl group. Nor do the references disclose a reseparable adhesive layer containing carbon black having a pH of 4 or less.

The rejection states that “regarding claim 2, Inoue et al. disclose the claimed invention as described above except for an anti-reflection layer formed on the side of the substrate” and relies on Aoyama as teaching an anti-reflection layer formed on the surface of a transparent substrate. However, Appellants herein reiterate the arguments set forth above regarding Inoue’s failure to teach and/or suggest each and every element of the claimed invention.

Aoyama fails to remedy the deficiencies of Inoue. Aoyama discloses a dot matrix-type display device in which an optical low-pass filter is provided on a display. Fig. 38 shows a structure in which a separator 13, an adhesive layer 12, a substrate 25, an optical-low pass filter 10, a bonding layer 11, a protective layer 14B, a polarizer 24a, an outside protective layer 14A, and an anti-reflection film 15 are laminated in succession. Aoyama discloses that the above laminate is incorporated into a glass substrate of a liquid-crystal panel with an adhesive layer 12. However, Aoyama does not at all disclose or suggest that carbon black is incorporated in the adhesive layer. Aoyama also fails to teach and/or suggest an attachment film that has dispersibility and light permeation (transparency). Aoyama also fails to disclose or suggest an

acrylic adhesive having a carboxyl group and/or a hydroxyl group. Nor does Aoyama disclose or suggest a reseparable adhesive layer containing carbon black having a pH of 4 or less.

Accordingly, Inoue alone or combined with Aoyama fails to teach and/or suggest each and every element of the claimed invention. Furthermore, there is no suggestion and/or motivation in either reference to combine the teachings of the two references. Thus, Inoue and Aoyama cannot render the claimed invention obvious. Therefore, the rejection of claim 2 under 35 U.S.C. § 103(a) is untenable and should be reversed.

**2. Inoue in view of Kawazu**

Claims 5 and 6 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Inoue et al., U.S. Patent No. 5,786,042, in view of Kawazu et al., U.S. Patent No. 5,876,854. Appellants respectfully traverse this rejection for the reasons noted above with regard to Inoue and for the following reasons.

The claims of the present invention call for an attachment film for an electronic display, which is for adjusting the quantity of transmitted light and for adjusting the black and white contrast, which comprises an adhesive layer which is re-separable and contains carbon black having a pH of 4 or less dispersed therein and contains an acrylic adhesive having a carboxyl group and/or a hydroxyl group and is formed on one surface of a transparent substrate, wherein the attachment film is colored neutral gray and the carbon black in the adhesive layer has an average particle diameter of 30 nm or less and has a BET specific surface area of at least 100 nm.

The rejection states that “regarding claims 5 and 6, Inoue et al. disclose all of the claimed subject matter except the attachment of film being colored in neutral gray.” Appellants again reiterate the arguments set forth above regarding Inoue’s failure to teach and/or suggest each and every element of the claimed invention.

Kawazu fails to remedy the deficiencies of Inoue. Kawazu discloses UV absorbing colored film-covered glass articles. The glass articles are used as glass plates with a UV absorbing, colored film. The plates are particularly suitable for use as windows of vehicles such

as automobiles and buildings. Kawazu, col. 1, pages 6-10. Kawazu discloses that "the color of the reflected light should preferably be close to neutral gray, and its value of a and b of the Lab color system should be most preferably 2.0 or below." Kawazu, col. 3, lines 29 to 34.

Kawazu is relied upon as disclosing the attachment of film being colored in neutral gray. However, the use and production process (col. 7, lines 41 to 47) of the UV absorbing colored film of Kawazu are completely different from those of the attachment film for an electronic display, provided by the present invention.

The invention of Kawazu is completely different from the attachment film for an electronic display in terms of usage. The purpose of the colored film of Kawazu is that "the reflectance of the light should preferably be as small as possible within a predetermined range." Kawazu, col. 3, lines 26-27. The rejection states it would have been obvious to a person having ordinary skill in the art to make attachment film having color in neutral gray in order to assure correct color of the displayed image. However, Kawazu does not at all teach that coloring can give correct color of a displayed image. Kawazu only describes that it is suitable for adjusting glittering in a proper range. Thus, Kawazu never teaches nor suggests an attachment film that has dispersibility and light permeation (transparency).

Kawazu also fails to disclose an acrylic adhesive having a carboxyl group and/or a hydroxyl group. Nor does Kawazu disclose a reseparable adhesive layer containing carbon black having a pH of 4 or less. Accordingly, neither Inoue nor Kawazu teach and/or suggest each and every element of the claimed invention. Furthermore, there is no suggestion and/or motivation in either reference to combine the teachings of the two references. Thus, Inoue and Kawazu cannot render the claimed invention obvious. Therefore, the rejection of claims 5 and 6 under 35 U.S.C. § 103(a) is untenable and should be reversed.

### **3. Inoue in view of Baker**

Claims 7 stands rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Inoue et al., U.S. Patent No. 5,786,042, in view of Baker et al., U.S. Patent No. 5,200,477. Appellants



respectfully traverse this rejection for the reasons noted above with regard to Inoue and for the following reasons.

The claimed invention calls for an attachment film for an electronic display, which is for adjusting the quantity of transmitted light and for adjusting the black and white contrast, which comprises an adhesive layer which is re-separable and contains carbon black having a pH of 4 or less dispersed therein and contains an acrylic adhesive having a carboxyl group and/or a hydroxyl group and is formed on one surface of a transparent substrate, wherein the carbon black has an average particle diameter of 30 nm or less and a BET specific surface area of at least 100 m<sup>2</sup>/g.

The rejection states that “regarding claim 7, Inoue et al. disclose the claimed invention as described above except for a BET specific surface area.” Again, Appellants reiterate the arguments set forth above regarding Inoue’s failure to teach and/or suggest each and every element of the claimed invention.

The secondary reference of Baker fails to remedy the deficiencies of Inoue. Baker is relied upon as teaching that carbon black having a specific surface area from 30 to 1,500 m<sup>2</sup>/g can be formed in the adhesive layer. However, Baker fails to remedy the deficiencies of Inoue in that it never teaches nor suggests an attachment film that has dispersibility and light permeation (transparency). Baker also fails to disclose an acrylic adhesive having a carboxyl group and/or a hydroxyl group. Nor does Baker disclose a reseparable adhesive layer containing carbon black having a pH of 4 or less.

Furthermore, Baker is directed to a process for preventing agglomeration of sticky polymers in a polymerization system which comprises adding to said polymerization system a specific amount of an inert particulate material having a surface coating thereon of an organo polydimethylsiloxane. Baker discloses carbon black having a predetermined particle diameter and a predetermined surface area as an inert particle.

The purpose, constitution and effect of Baker are completely different from those of the present invention. In this regard, Baker only discloses a carbon black which partially overlaps the

carbon black of the present invention in terms of a particle diameter and the like. By contrast, the present invention is characterized in that the acid carbon black has a pH of 4 or less. Neither Inoue nor Baker teach and/or suggest this. Nor does Baker teach an attachment film that has dispersibility and light permeation (transparency) and an acrylic adhesive having a carboxyl group and/or a hydroxyl group. Furthermore, there is no suggestion and/or motivation in either reference to combine the teachings of the two references. Thus, Inoue and Baker cannot render the claimed invention obvious. Therefore, the rejection of claim 7 under 35 U.S.C. § 103(a) is untenable and should be reversed.

**4. Inoue in view of Urano**

Claims 9 and 10 have been rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Inoue et al., U.S. Patent No. 5,786,042, in view of Urano et al., U.S. Patent No. 5,800,952. Appellants respectfully traverse this rejection for the reasons noted above with regard to Inoue and for the following reasons.

The claims of the present invention call for an attachment film for an electronic display, which is for adjusting the quantity of transmitted light and for adjusting the black and white contrast, which comprises an adhesive layer which is re-separable and contains carbon black having a pH of 4 or less dispersed therein and contains an acrylic adhesive having a carboxyl group and/or a hydroxyl group and is formed on one surface of a transparent substrate, wherein the adhesive layer further contains a photopolymerizable compound and a photopolymerization initiator and the adhesive layer contains a (meth)acrylate resin as an adhesive.

The rejection states that "Inoue et al. disclose all claimed subject matter except that the adhesive layer further contains a photopolymerizable compound and a photo polymerization initiator. Again, Appellants reiterate the arguments set forth above regarding Inoue's failure to teach and/or suggest each and every element of the claimed invention.

Urano fails to remedy the deficiencies of Inoue. Urano relates to a color filter useful for a color television, a liquid crystal display device, a camera and the like. As pointed out by the

rejection, Urano discloses that the adhesive layer further contains a photopolymerizable compound and a photopolymerization initiator to improve the developability, the sensitivity, the image-reproducing property and the adhesive property.

Urano is relied upon as disclosing that the adhesive layer further contains photopolymerizable compound and a photo polymerization initiator. Urano discloses a photopolymerizable composition for a color filter comprising at least a photopolymerization initiator system. The photopolymerizable composition accomplishes the function to improve the compatibility, the coating film-forming property, the developability, and the adhesive property. Urano, col. 2, lines 26-41.

However, the invention of Urano is a transparent substrate having a color pattern formed thereon from a photopolymeric composition. In contrast, the attachment film for an electronic display, provided by the present invention, comprises an adhesive layer which contains carbon black dispersed therein and is formed on one surface of a transparent substrate. In the present invention, the developability, the sensitivity, the image-reproducing property are not required.

Thus, the use of the present invention is completely different from the use of the invention of Urano. Properties such as the property of being re-separable, no component deposits when peeled off, no occurrence of bubbles in the adhesive layer and an improvement in light resistance, are required for the present invention. A photopolymerizable compound and a photopolymerization initiator are incorporated for satisfying these required properties.

Furthermore, the photopolymerizable composition disclosed by Urano only mentions the function of the above composition as a binder at the time of film application. Urano neither discloses nor teaches the functions and effects to be produced by the instantly claimed invention. Under the above circumstances, no one skilled in the art would think to apply the teachings of Urano, which relates to a color filter, for satisfying the above properties required in the present invention. Urano also never teaches nor suggests an attachment film that has dispersibility and light permeation (transparency). Urano also fails to disclose an acrylic adhesive having a carboxyl

group and/or a hydroxyl group. Nor does Urano disclose a reseparable adhesive layer containing carbon black having a pH of 4 or less.

Accordingly, neither Inoue nor Urano teach and/or suggest each and every element of the claimed invention. Furthermore, there is no suggestion and/or motivation in either reference to combine the teachings of the two references. Thus, Inoue and Urano cannot render the claimed invention obvious. Therefore, the rejection of claims 9 and 10 under 35 U.S.C. § 103(a) is untenable and should be reversed.

**5. Inoue in view of Urano and Aoyama**

Claim 11 has been rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Inoue et al., U.S. Patent No. 5,786,042, in view of Urano et al., U.S. Patent No. 5,800,952 and further in view of Aoyama et al., U.S. Patent No. 6,147,732. Appellants respectfully traverse this rejection for the reasons noted above with regard to Inoue, Urano and Aoyama and for the following reasons.

The claimed invention calls for an attachment film for an electronic display, which is for adjusting the quantity of transmitted light and for adjusting the black and white contrast, which comprises an adhesive layer which is re-separable and contains carbon black having a pH of 4 or less dispersed therein and contains an acrylic adhesive having a carboxyl group and/or a hydroxyl group and is formed on one surface of a transparent substrate, wherein the adhesive layer is formed on one surface of a substrate and a hard coating layer and an anti-reflection layer of formed consecutively on the other surface of the substrate.

The rejection states that "Inoue et al. disclose all claimed subject matter except for a hard coating layer and an anti-reflecting layer being consecutively formed on the other surface of a transparent layer." Inoue, Urano, and Aoyama have been discussed above. Appellants reiterate the arguments set forth above regarding these references.

As discussed above, the secondary references of Urano and Aoyama fail to remedy the deficiencies of Inoue. Urano and Aoyama are relied upon as disclosing a hard coating layer and

an anti-reflecting layer being consecutively formed on the other surface of a transparent layer. However, Urano and Aoyama fail to remedy the deficiencies of Inoue in that they fail to teach and/or suggest an attachment film that has the properties of dispersibility and light permeation (transparency). They also fail to disclose an acrylic adhesive having a carboxyl group and/or a hydroxyl group. Nor do they disclose a reseparable adhesive layer containing carbon black having a pH of 4 or less. Accordingly, neither Inoue, Urano nor Aoyama teach and/or suggest each and every element of the claimed invention. Furthermore, there is no suggestion and/or motivation in either reference to combine the teachings of the three references. Thus, these references cannot render the claimed invention obvious.

Therefore, the rejection of claim 11 under 35 U.S.C. § 103(a) is untenable and should be reversed.

**IX. CONCLUSION**

For the foregoing reasons, it is submitted that claims 1-7 and 9-11 are neither anticipated nor rendered obvious by the references relied upon by the Examiner, and thus, reversal of the final rejection is respectfully requested.

This Appeal Brief is submitted in triplicate with the requisite Government fee.

Respectfully submitted,

Takuma HATTORI et al.

By: \_\_\_\_\_

Jay F. Williams

Registration No. 48,036

Attorney for Applicants

MMJ/JFW/nk  
Washington, D.C. 20006-1021  
Telephone (202) 721-8200  
Facsimile (202) 721-8250  
January 7, 2004

APPENDIX A

CLAIMS ON APPEAL

Claim 1. An attachment film for an electronic display, which is for adjusting the quantity of transmitted light from a light source and adjusting the black and white contrast, which comprises an adhesive layer which is re-separable and contains carbon black having a pH of 4 or less dispersed therein and contains an acrylic adhesive having a carboxyl group and/or a hydroxyl group and is formed on one surface of a transparent substrate.

Claim 2. An attachment film according to claim 1, wherein an anti-reflection layer is formed on one surface or each surface of the transparent layer.

Claim 3. An attachment film according to claim 1, wherein the adhesive layer further contains a coloring pigment different from carbon black.

Claim 4. An attachment film according to claim 3, wherein the coloring pigment is at least one pigment selected from the group consisting of a red pigment and a blue pigment.

Claim 5. An attachment film according to claim 1, wherein the attachment film is colored in neutral gray.

Claim 6. An attachment film according to claim 5, which has an a-value and b-value which are within  $\pm 5$  each when measured with a color-difference meter.

Claim 7. An attachment film according to claim 1, wherein the carbon black in the adhesive layer has an average particle diameter of 30 nm or less and has a BET specific surface area of at least 100 m<sup>2</sup>/g.

Claim 9. An attachment film according to claim 1, wherein the adhesive layer further contains a photopolymerizable compound and a photopolymerization initiator.

Claim 10. The attachment film according to claim 1, wherein the adhesive layer contains a (meth) acrylate resin as an adhesive and a (meth) acrylate monomer or oligomer as the photopolymerizable compound.

Claim 11. The attachment film according to claim 1, wherein the adhesive layer is formed on one surface of the transparent substrate and a hard coating layer and an anti-reflection layer are consecutively formed on the other surface of the transparent substrate.